Department of Computing

COMP3770/6770:
**Management of IT Systems and Projects**


Semester 1, 2021

Week 3 Practical

**Microsoft Project – A working example**

A working example!

This practical makes use of the MyProject file. You can import it in to your MS Project version and have a look. Or if you feel like a challenge you can try re-creating what I have done. The screen below shows the above file imported in to my MS Project Pro software.
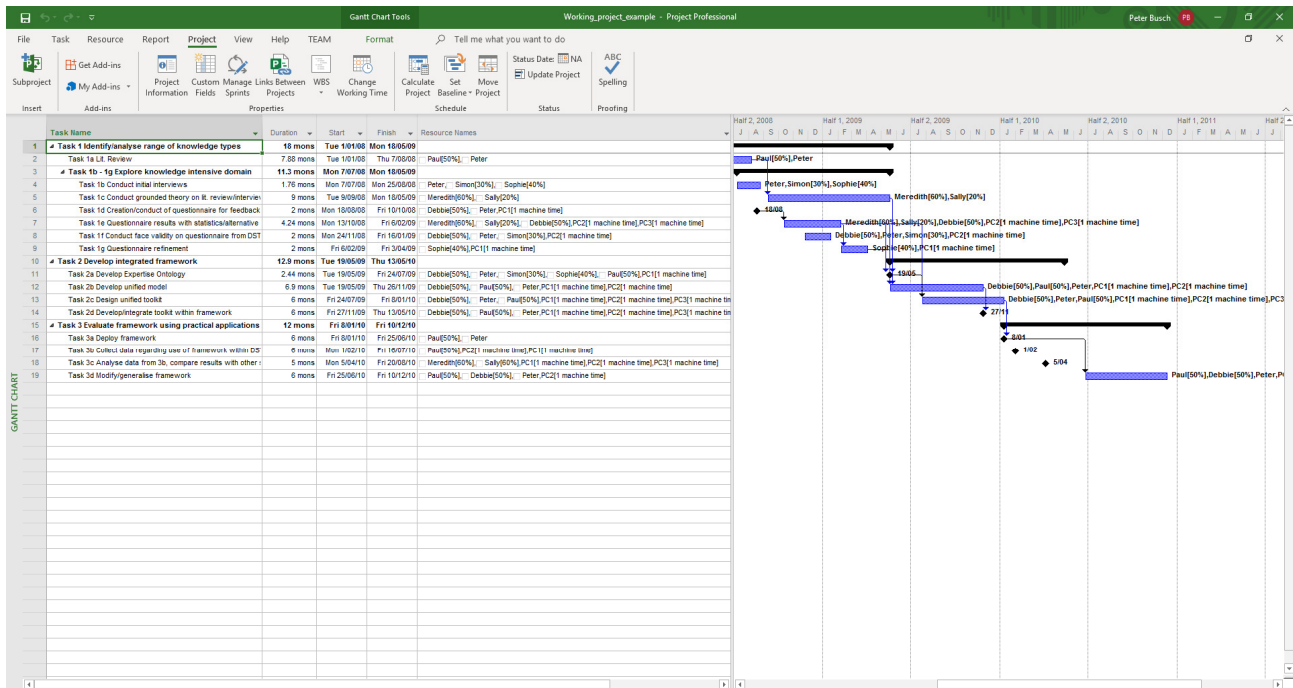

Under **Project** – you will find **information** (assuming you are using the same version) and the following appears which shows a little information.
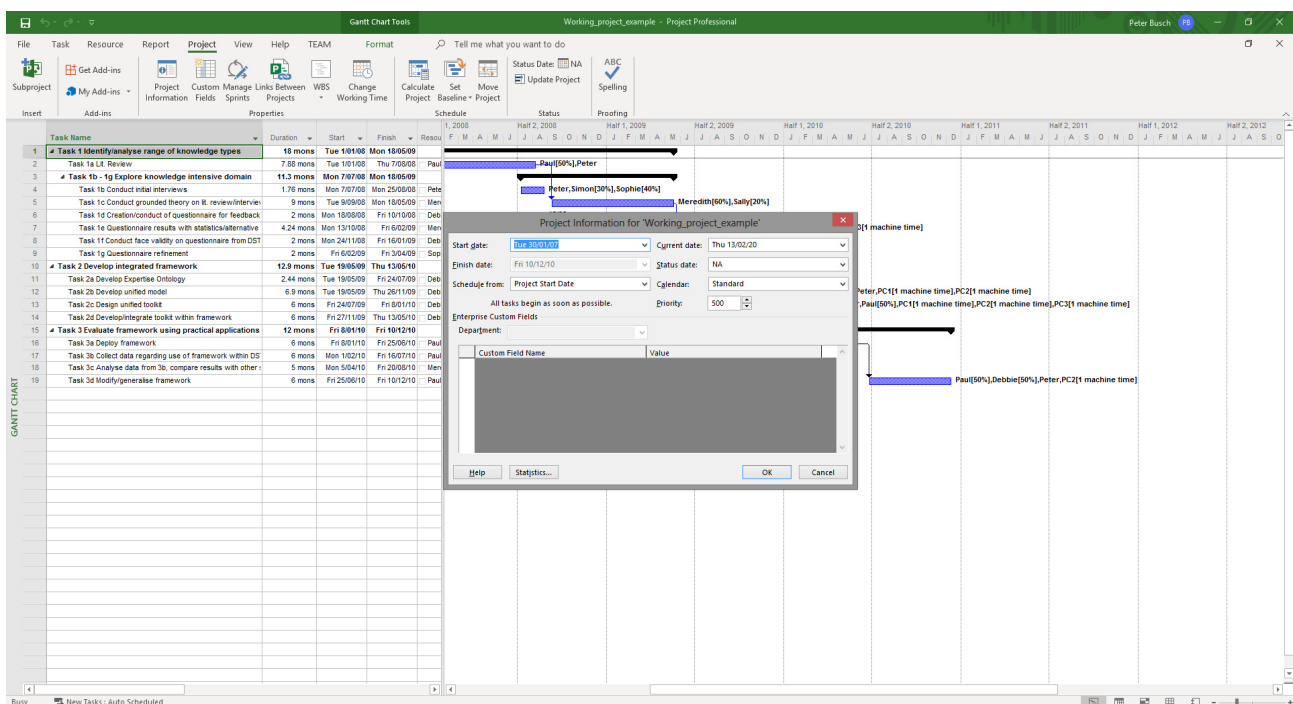
I imported an older project I had – and updated it, in as much as I wanted the dates to match current ones, not past ones. Play with **Update Project** etc. See what you can do.
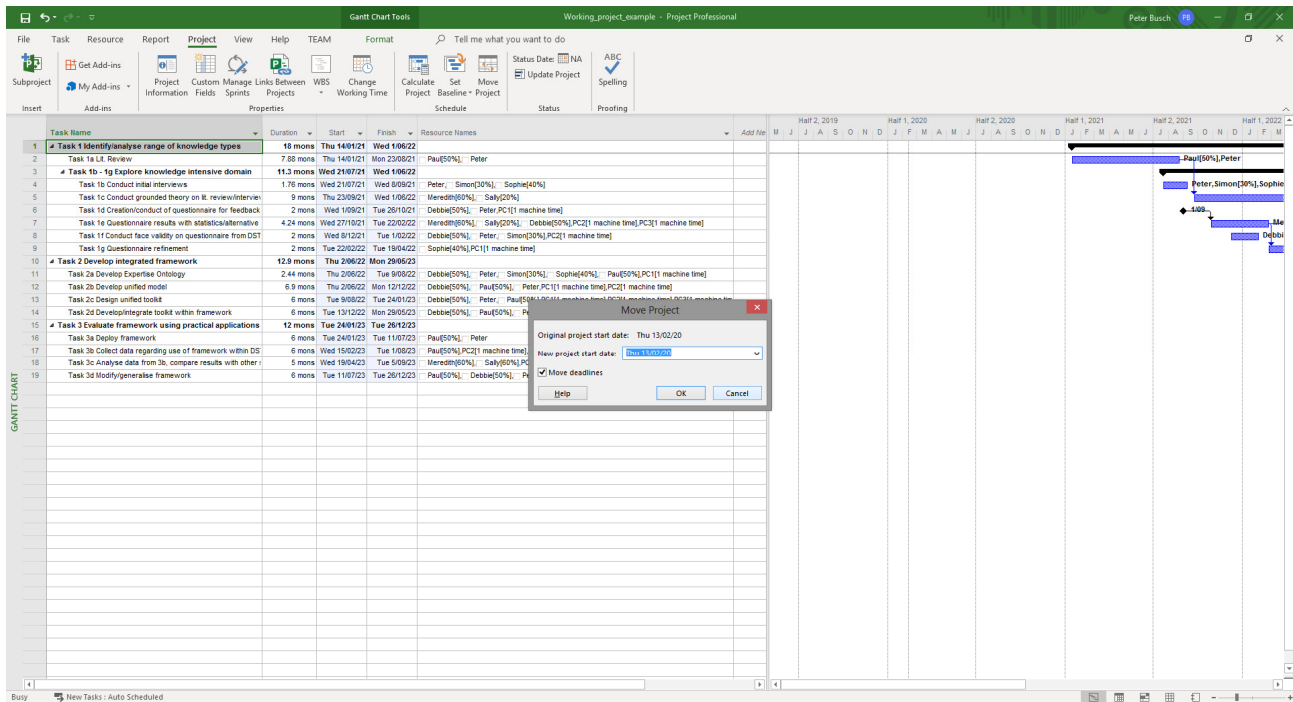
Note for each of the tasks, you can bring information on the resources by clicking on the **Resource** tab and then look at assigning resources.
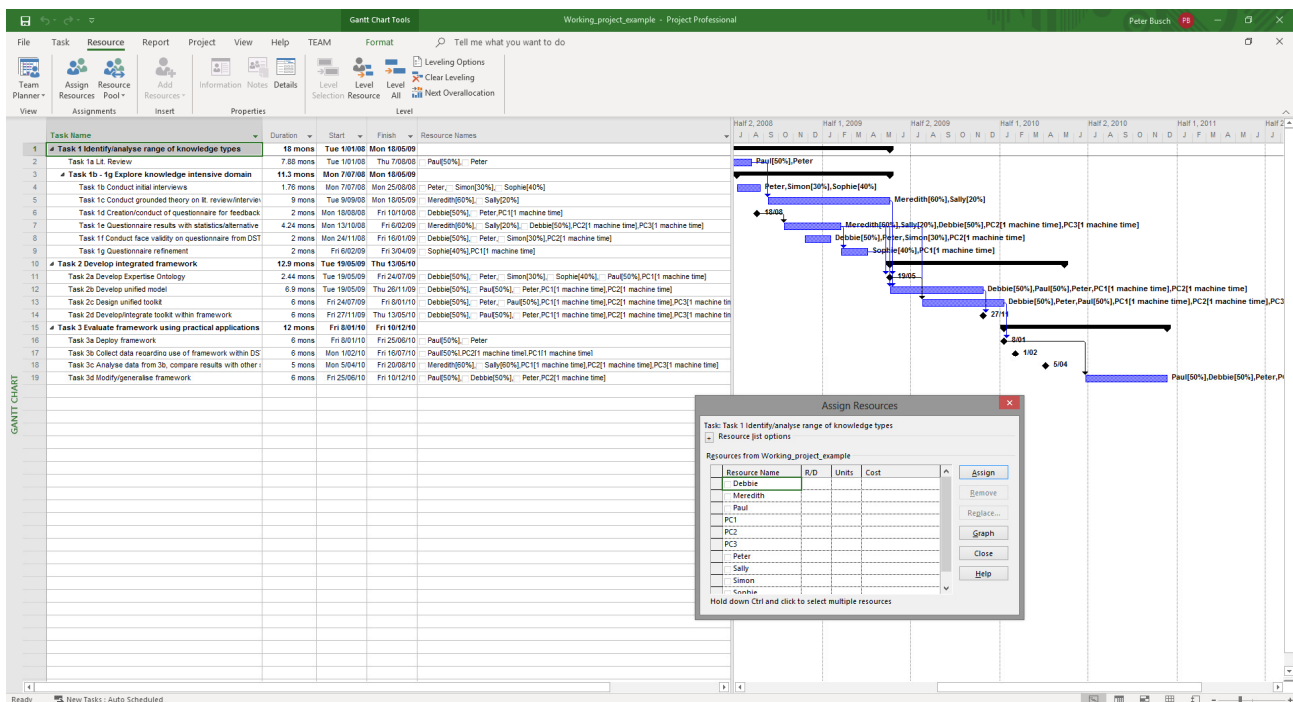
You can click on the **View** tab and have a look at **Task Usage** for each of the given tasks.
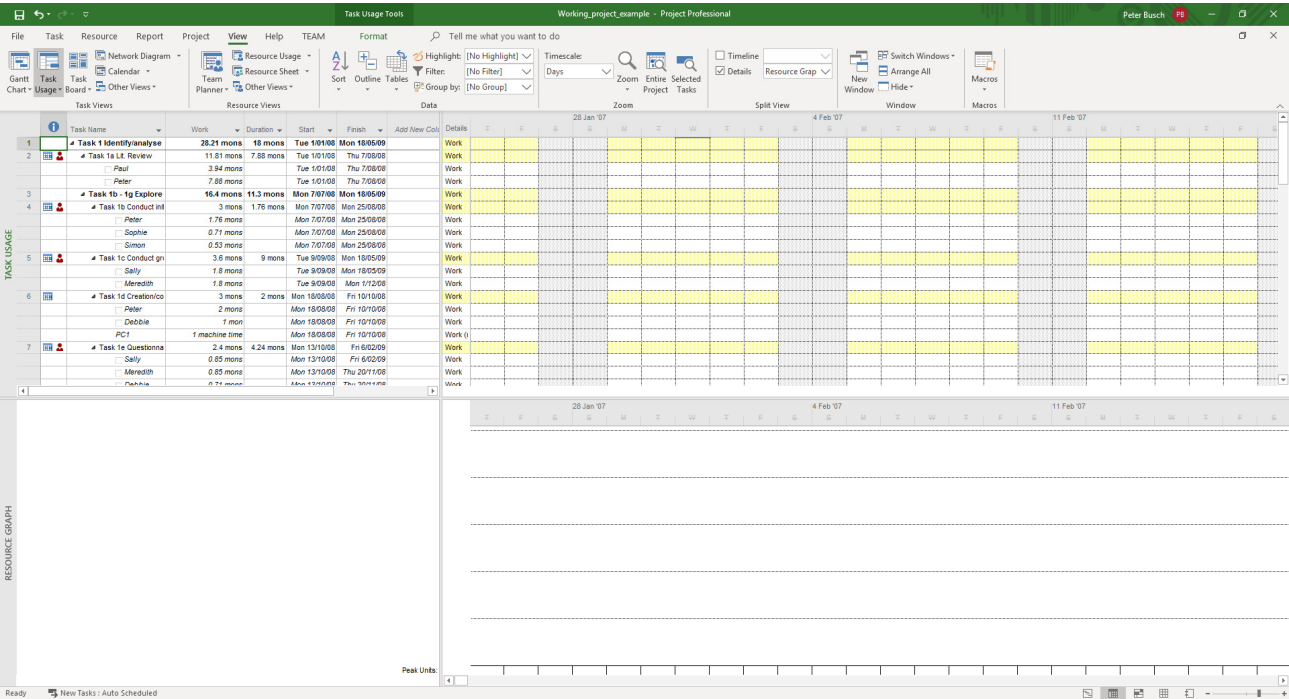
Reports … in various forms

Obviously we don't just want to input information – we also want to produce reports for the boss based on how we are tracking. The lectures will also mention measurements like Earned Value Management (EVM) which shows how we tracking both time and cost-wise. You might just initially want a **Cost Overview**. By looking under the **Design** tab, you can get an idea of this.
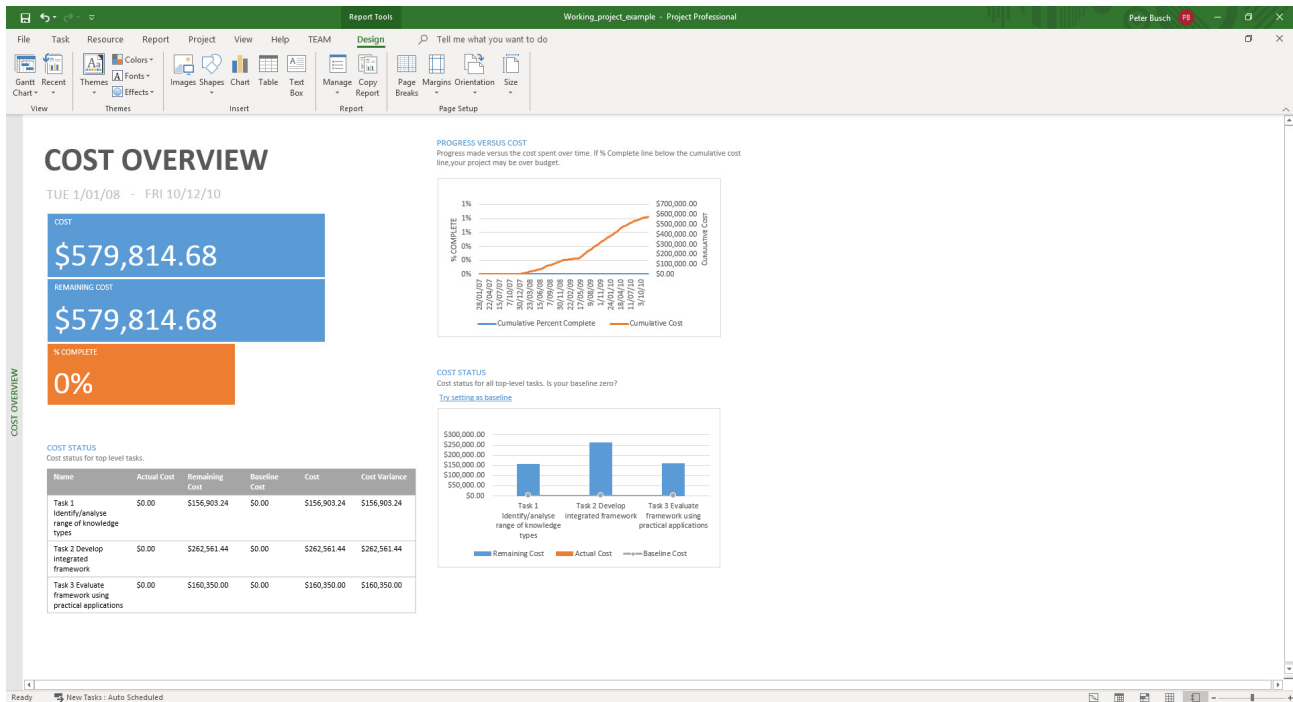
Or **Project Overview** for how the project is generally tracking, not % of tasks complete etc.
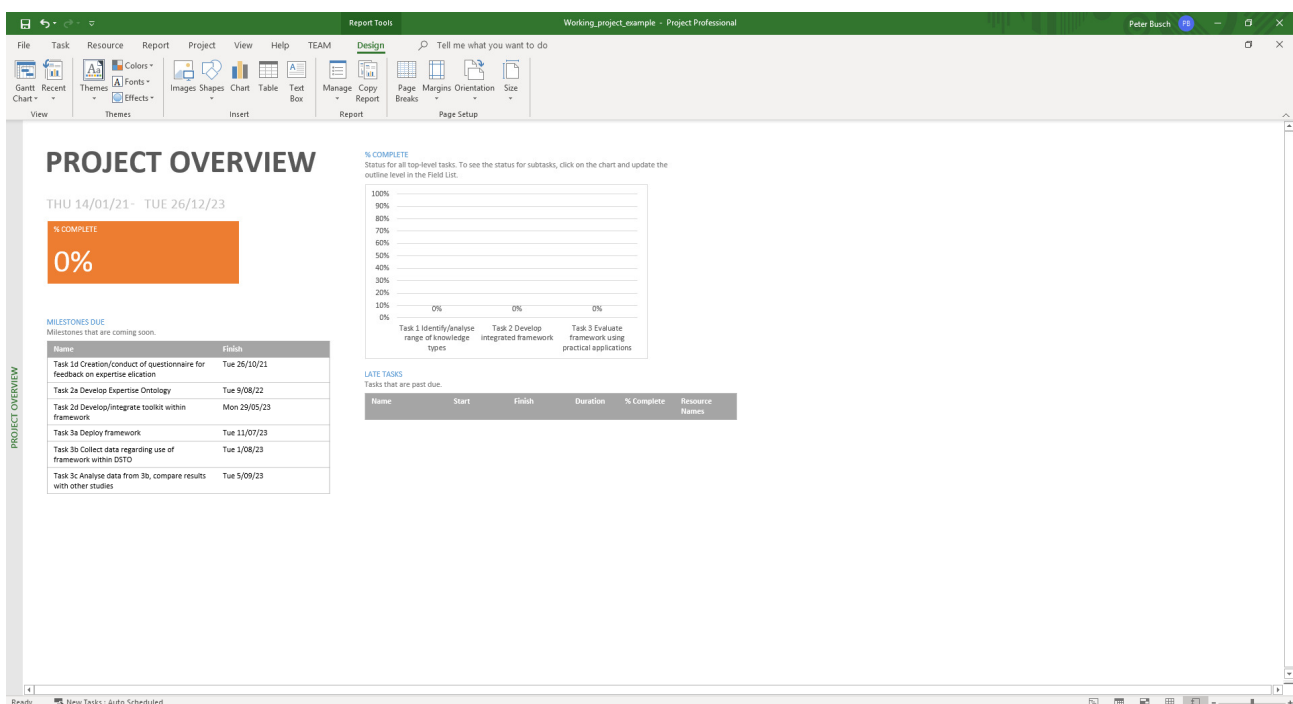
The boss is often interested in the **Work Overview** to see how much time is remaining. What actual work is complete and what remains etc.
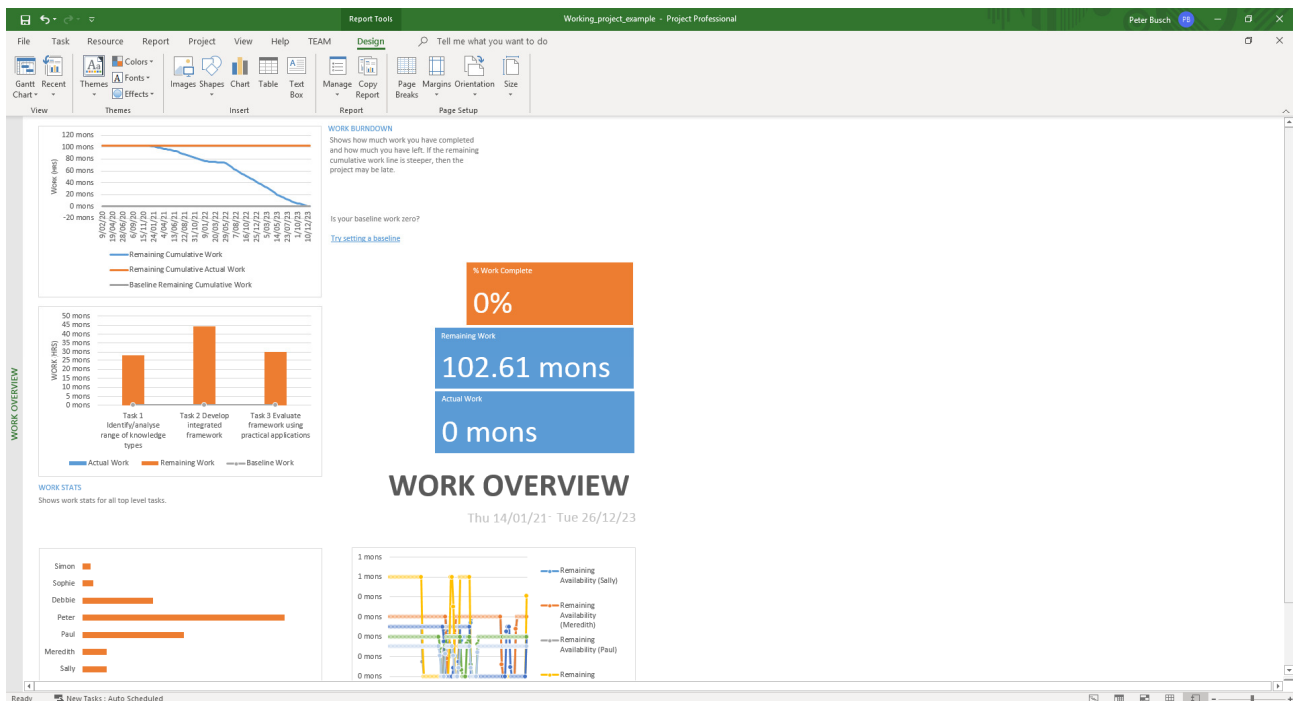
Naturally **Overallocated Resources** (again under the **Design** tab), lets us see which resources are over-allocated and so being overallocated - perhaps these will cost more in effort, money etc. being thrown at them to get tasks completed?
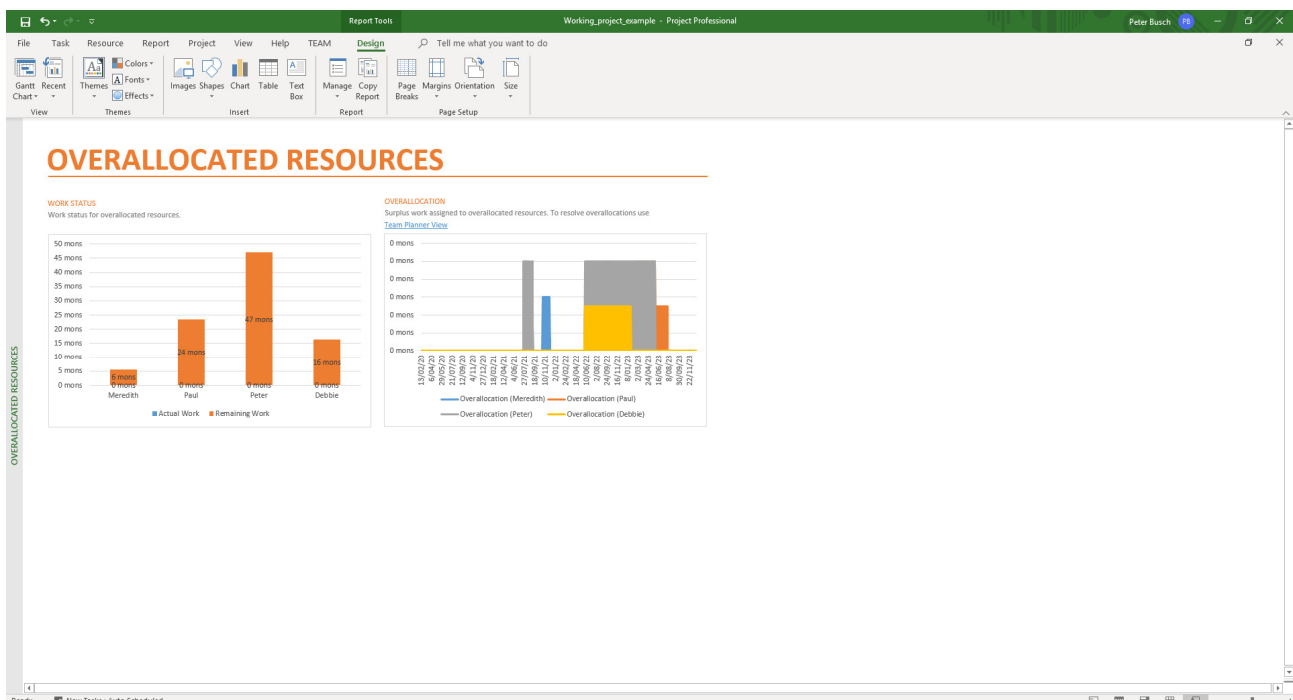
Resource Overview allows us to see our staff for example, or machines etc. and how these are being used. Our department manager (Ms. Melina Chan) actually has to keep track of how we as staff are allocated and who is overloaded with teaching etc.
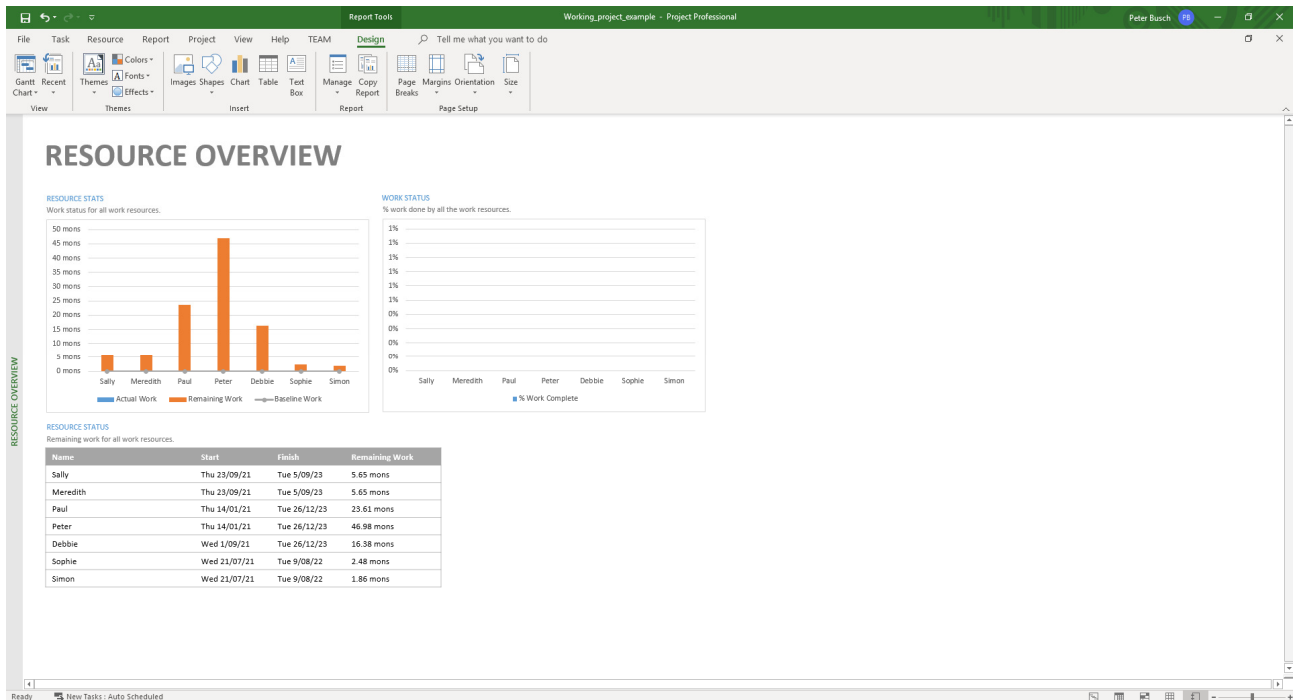
Costs of course … every boss wants to know about these.
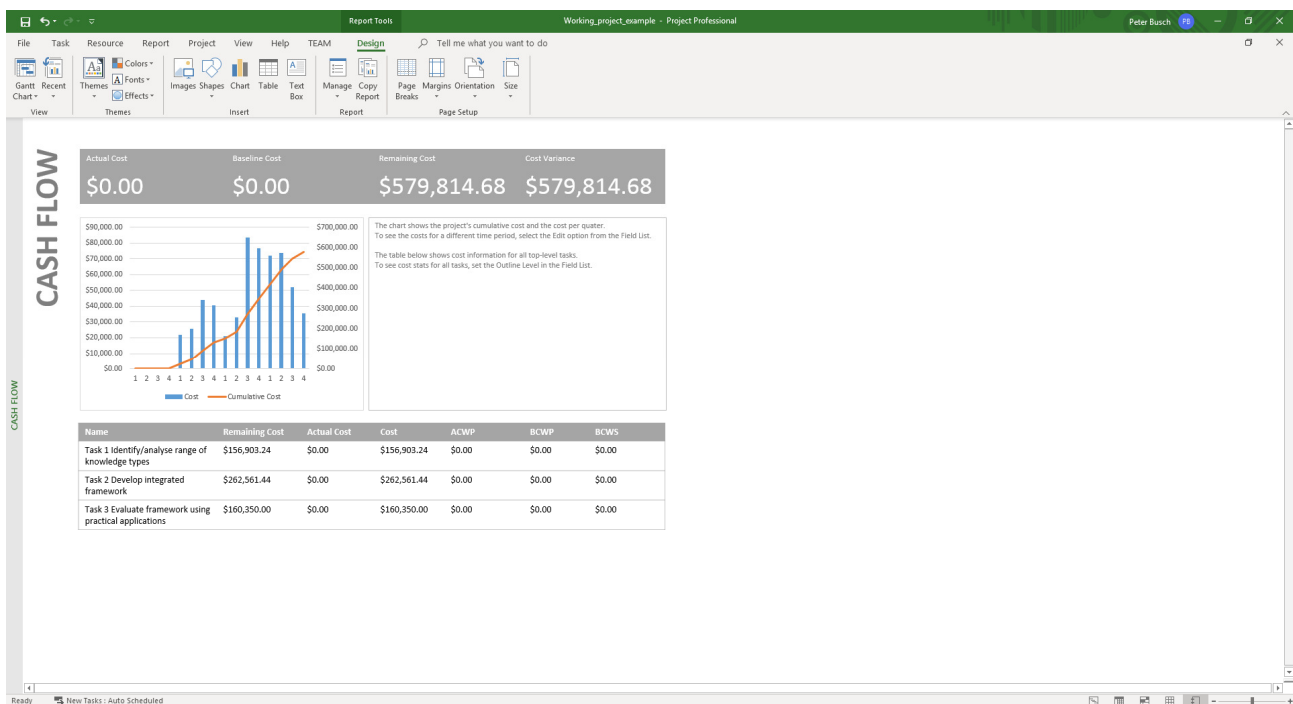
Even **EVM** (Earned Value Management) which I mentioned above … note we look at this in about week 4.
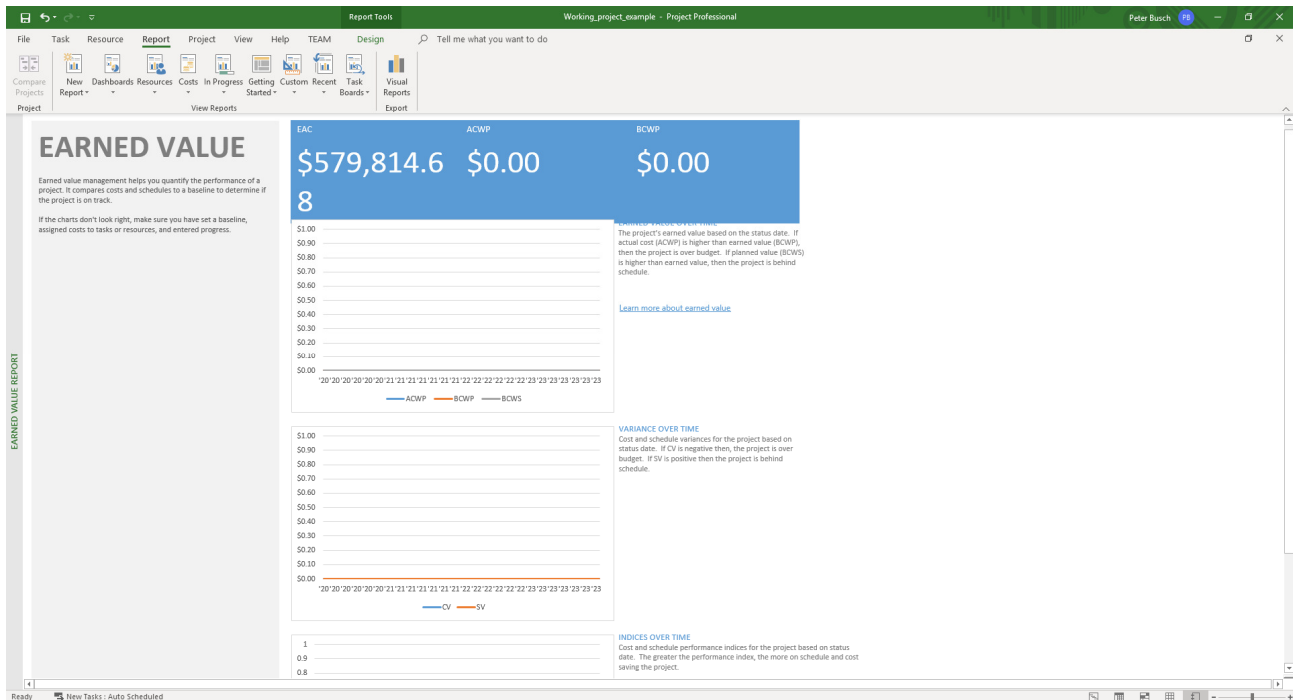
Having looked that above, why not work through the following from a previous MS Project practical I had created a few years ago. Yes the screens look different because they are in an earlier version of project.

A brief tutorial on creating a project

Now have a go for yourself at perhaps re-creating the same inputs as I showed above. The following screenshots are from an **earlier version of MS Project** (who knows perhaps you are even using this one – **it really doesn't matter what version you use as long as it is PM software**).

Briefly the tasks are as follows. Begin by creating a new project.

Go to **Options** under the **Tools** window and set the parameters you desire. Now depending on the version of the software, the tabs will differ, but have a look at the screenshots below first and then work out which version of the software you are using matches these?

Again I don't care for the assignment if you even don't use MS Project, but use another (PM) software of your choosing!
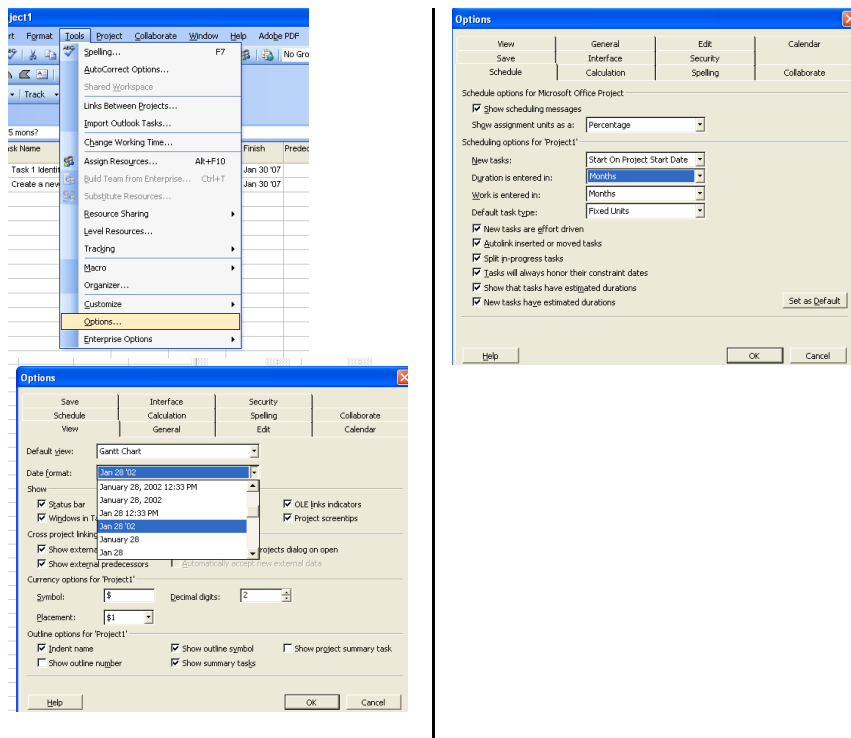
See how in the figures above I have stipulated how dates should appear and that units of measurement should be in months and so on. Familiarise yourself with the sub-menus.

Now start entering all the tasks (including sub-tasks), you should end up with a project chart that looks something along the following lines:
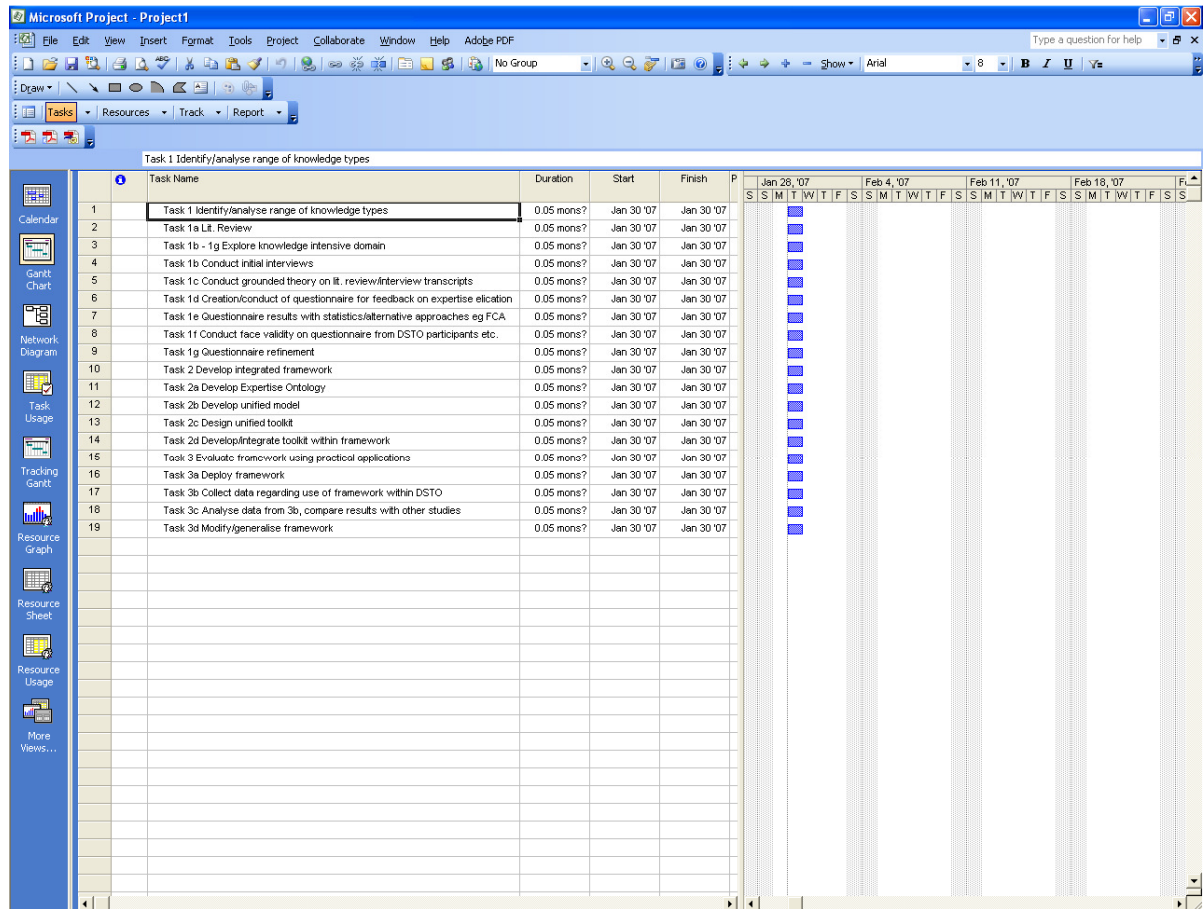
We now wish to create subtasks. Begin by highlighting the task you wish to have as a subtask, e.g.:

And so on …

Task Name	Duration	Start	Finish	P
⊟ Task 1 Identify/analyse range of knowledge types	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1a Lit. Review	0.05 mons?	Jan 30 '07	Jan 30 '07	
⊟ Task 1b - 1g Explore knowledge intensive domain	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1b Conduct initial interviews	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1c Conduct grounded theory on lit. review/interview transcripts	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1d Creation/conduct of questionnaire for feedback on expertise	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1e Questionnaire results with statistics/alternative approaches	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1f Conduct face validity on questionnaire from DSTO participant	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 1g Questionnaire refinement	0.05 mons?	Jan 30 '07	Jan 30 '07	
⊟ Task 2 Develop integrated framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2a Develop Expertise Ontology	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2b Develop unified model	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2c Design unified toolkit	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2d Develop/integrate toolkit within framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
⊟ Task 3 Evaluate framework using practical applications	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3a Deploy framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3b Collect data regarding use of framework within DSTO	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3c Analyse data from 3b, compare results with other studies	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3d Modify/generalise framework	0.05 mons?	Jan 30 '07	Jan 30 '07	

And now we are in a situation to start considering the how many months we would like to allocate to these tasks. As this is a proposal for an ARC (Australian Research Council) grant one is expected to apply a year before the funding becomes available, for this reason you will note the tasks begin in January 2008 (unless you have imported this project and updated it in the previous practical?

At this stage, try changing the month allocation to the 'super' task. Note that the allocation will be greyed out. You need to make allocations in the subtasks and this will be reflected in the 'super' task. Notice how as you fix the parameters for the subtask the supertask will initially appear to be 'out of sync'. By the time you have finished fixing the parameters you will be able to see the supertask dates should end up at the start date you have set for the initial subtask under that supertask, for example:

Task Name	Duration	Start	Finish	P
⊟ Task 1 Identify/analyse range of knowledge types	15.2 mons	Jan 1 '08	Feb 27 '09	
Task 1a Lit. Review	9 mons	Jan 1 '08	Sep 8 '08	
⊟ Task 1b - 1g Explore knowledge intensive domain	8.5 mons	Jul 7 '08	Feb 27 '09	
Task 1b Conduct initial interviews	3 mons	Jul 7 '08	Sep 26 '08	
Task 1c Conduct grounded theory on lit. review/interview transcripts	3 mons	Sep 9 '08	Dec 1 '08	
Task 1d Creation/conduct of questionnaire for feedback on expertise	2 mons	Aug 18 '08	Oct 10 '08	
Task 1e Questionnaire results with statistics/alternative approaches	2 mons	Oct 13 '08	Dec 5 '08	
Task 1f Conduct face validity on questionnaire from DSTO participant	2 mons	Nov 24 '08	Jan 16 '09	
Task 1g Questionnaire refinement	2 mons	Jan 5 '09	Feb 27 '09	
⊟ Task 2 Develop integrated framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2a Develop Expertise Ontology	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2b Develop unified model	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2c Design unified toolkit	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 2d Develop/integrate toolkit within framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
⊟ Task 3 Evaluate framework using practical applications	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3a Deploy framework	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3b Collect data regarding use of framework within DSTO	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3c Analyse data from 3b, compare results with other studies	0.05 mons?	Jan 30 '07	Jan 30 '07	
Task 3d Modify/generalise framework	0.05 mons?	Jan 30 '07	Jan 30 '07	

Now I shall finish off the start dates. The finish dates will be automatically calculated. Note in this instance that the project (ARC grant) will finish in December of 2010 (this is because funding in this case is for a 3 year cycle).

Now you will notice once you have finished and scrolled along to the start of 2008 (to show the gantt chart, you can't see this all on one screen:

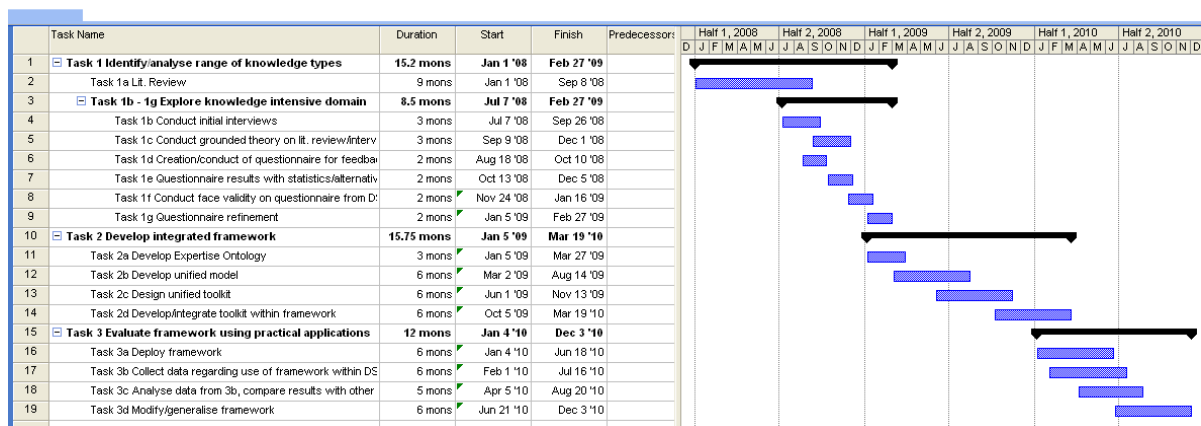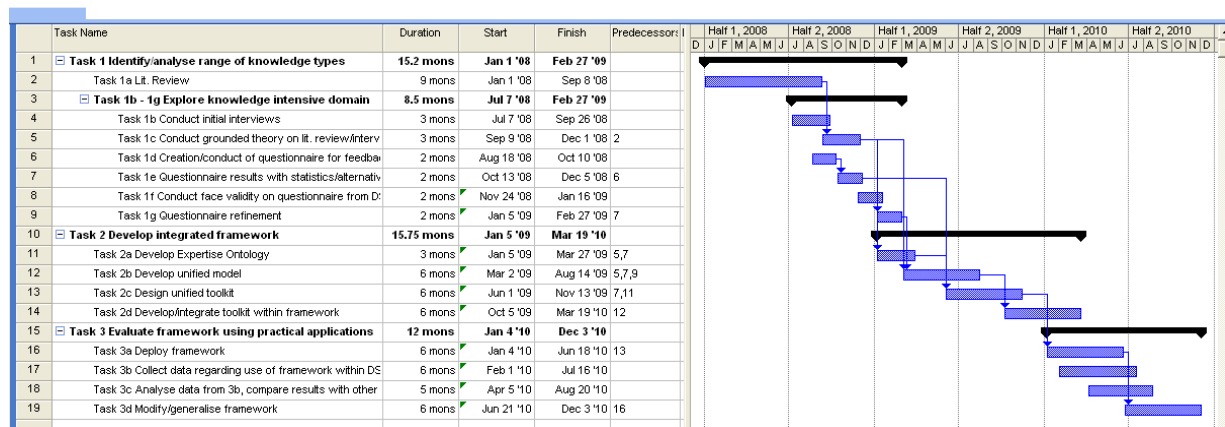|	Task Name	Duration	Start	Finish	Predecessor
1	Task 1 Identify/analyse range of knowledge types	15.2 mons	Jan 1 '08	Feb 27 '09	
2	Task 1a Lit. Review	9 mons	Jan 1 '08	Sep 8 '08	
3	Task 1b - 1g Explore knowledge intensive domain	8.5 mons	Jul 7 '08	Feb 27 '09	
4	Task 1b Conduct initial interviews	3 mons	Jul 7 '08	Sep 26 '08	
5	Task 1c Conduct grounded theory on lit. review/interview transcripts	3 mons	Sep 9 '08	Dec 1 '08	
6	Task 1d Creation/conduct of questionnaire for feedback on expertise elication	2 mons	Aug 18 '08	Oct 10 '08	
7	Task 1e Questionnaire results with statistics/alternative approaches eg FCA	2 mons	Oct 13 '08	Dec 5 '08	
8	Task 1f Conduct face validity on questionnaire from DSTO participants etc.	2 mons	Nov 24 '08	Jan 16 '09	
9	Task 1g Questionnaire refinement	2 mons	Jan 5 '09	Feb 27 '09	
10	Task 2 Develop integrated framework	15.75 mons	Jan 5 '09	Mar 19 '10	
11	Task 2a Develop Expertise Ontology	3 mons	Jan 5 '09	Mar 27 '09	
12	Task 2b Develop unified model	6 mons	Mar 2 '09	Aug 14 '09	
13	Task 2c Design unified toolkit	6 mons	Jun 1 '09	Nov 13 '09	
14	Task 2d Develop/integrate toolkit within framework	6 mons	Oct 5 '09	Mar 19 '10	
15	Task 3 Evaluate framework using practical applications	12 mons	Jan 4 '10	Dec 3 '10	
16	Task 3a Deploy framework	6 mons	Jan 4 '10	Jun 18 '10	
17	Task 3b Collect data regarding use of framework within DSTO	6 mons	Feb 1 '10	Jul 16 '10	
18	Task 3c Analyse data from 3b, compare results with other studies	5 mons	Apr 5 '10	Aug 20 '10	
19	Task 3d Modify/generalise framework	6 mons	Jun 21 '10	Dec 3 '10	

To that end use the magnifying glass zoom in/zoom out tool on the top menu bar and click on your right hand window to zoom the gantt chart out.

Reposition your windows so that you can see all of the items of relevance on your screen, like so:

	Task Name	Duration	Start	Finish	Predecessors
1	Task 1 Identify/analyse range of knowledge types	15.2 mons	Jan 1 '08	Feb 27 '09	
2	Task 1a Lit. Review	9 mons	Jan 1 '08	Sep 8 '08	
3	Task 1b - 1g Explore knowledge intensive domain	8.5 mons	Jul 7 '08	Feb 27 '09	
4	Task 1b Conduct initial interviews	3 mons	Jul 7 '08	Sep 26 '08	
5	Task 1c Conduct grounded theory on lit. review/interv	3 mons	Sep 9 '08	Dec 1 '08	
6	Task 1d Creation/conduct of questionnaire for feedba	2 mons	Aug 18 '08	Oct 10 '08	
7	Task 1e Questionnaire results with statistics/alternativ	2 mons	Oct 13 '08	Dec 5 '08	
8	Task 1f Conduct face validity on questionnaire from D:	2 mons	Nov 24 '08	Jan 16 '09	
9	Task 1g Questionnaire refinement	2 mons	Jan 5 '09	Feb 27 '09	
10	Task 2 Develop integrated framework	15.75 mons	Jan 5 '09	Mar 19 '10	
11	Task 2a Develop Expertise Ontology	3 mons	Jan 5 '09	Mar 27 '09	
12	Task 2b Develop unified model	6 mons	Mar 2 '09	Aug 14 '09	
13	Task 2c Design unified toolkit	6 mons	Jun 1 '09	Nov 13 '09	
14	Task 2d Develop/integrate toolkit within framework	6 mons	Oct 5 '09	Mar 19 '10	
15	Task 3 Evaluate framework using practical applications	12 mons	Jan 4 '10	Dec 3 '10	
16	Task 3a Deploy framework	6 mons	Jan 4 '10	Jun 18 '10	
17	Task 3b Collect data regarding use of framework within DS	6 mons	Feb 1 '10	Jul 16 '10	
18	Task 3c Analyse data from 3b, compare results with other	5 mons	Apr 5 '10	Aug 20 '10	
19	Task 3d Modify/generalise framework	6 mons	Jun 21 '10	Dec 3 '10	

Now we should really consider whether some tasks are likely to be predecessors of others. The reason this is important is that we need to know if we really *have* to finish one task before we start another. In the case of the grant we have used as an example of MS project, quite a few of the tasks overlap. However some tasks could nevertheless be considered predecessors of some others. Here is what the chart would look like if I added in predecessor tasks. For example subtask 1c has a predecessor task: (**2** *Task 1a Literature review*), in other words the subtask in this case listed on line 2 and so on.

	Task Name	Duration	Start	Finish	Predecessors
1	⊟ Task 1 Identify/analyse range of knowledge types	15.2 mons	Jan 1 '08	Feb 27 '09	
2	Task 1a Lit. Review	9 mons	Jan 1 '08	Sep 8 '08	
3	⊟ Task 1b - 1g Explore knowledge intensive domain	8.5 mons	Jul 7 '08	Feb 27 '09	
4	Task 1b Conduct initial interviews	3 mons	Jul 7 '08	Sep 26 '08	
5	Task 1c Conduct grounded theory on lit. review/interv	3 mons	Sep 9 '08	Dec 1 '08	2
6	Task 1d Creation/conduct of questionnaire for feedba	2 mons	Aug 18 '08	Oct 10 '08	
7	Task 1e Questionnaire results with statistics/alternativ	2 mons	Oct 13 '08	Dec 5 '08	6
8	Task 1f Conduct face validity on questionnaire from DS	2 mons	Nov 24 '08	Jan 16 '09	
9	Task 1g Questionnaire refinement	2 mons	Jan 5 '09	Feb 27 '09	7
10	⊟ Task 2 Develop integrated framework	15.75 mons	Jan 5 '09	Mar 19 '10	
11	Task 2a Develop Expertise Ontology	3 mons	Jan 5 '09	Mar 27 '09	5,7
12	Task 2b Develop unified model	6 mons	Mar 2 '09	Aug 14 '09	5,7,9
13	Task 2c Design unified toolkit	6 mons	Jun 1 '09	Nov 13 '09	7,11
14	Task 2d Develop/integrate toolkit within framework	6 mons	Oct 5 '09	Mar 19 '10	12
15	⊟ Task 3 Evaluate framework using practical applications	12 mons	Jan 4 '10	Dec 3 '10	
16	Task 3a Deploy framework	6 mons	Jan 4 '10	Jun 18 '10	13
17	Task 3b Collect data regarding use of framework within DS	6 mons	Feb 1 '10	Jul 16 '10	
18	Task 3c Analyse data from 3b, compare results with other	5 mons	Apr 5 '10	Aug 20 '10	
19	Task 3d Modify/generalise framework	6 mons	Jun 21 '10	Dec 3 '10	16

If you expand the left hand window you will note the second column shows an **indicator** field. These indicators basically provide you with ready reference information for any given task. You will note indicators for only the subtasks are provided.

By this stage, having set up a number of tasks, we can start to examine some of the screens of relevance. If you double click on any task the following set of tab menus appear, beginning with **General**, followed by **Predecessors**, **Resources**, **Advanced**, **Notes** and **Custom Panels**.

General

Predecessors

Resources

Advanced

Notes

Custom Fields

Let us add some information where necessary. Click on the first subtask 1a, beginning with the **General** field, click on the estimated box. You will note MS Project adds a question mark to this value. Click okay and when you are returned to the main screen you will note the relevant changes have been made to the subtask itself. Go back and unclick (there is no real need here to be uncertain about our task duration, 9 months is long enough to conduct our literature review. While we are here play with the **Hide task bar** and **Roll up Gantt bar to summary** boxes and see what MS Project does.

With regard to the **Predecessor** field, we have already added some predecessors where necessary, for example double click on task 1c and the Predecessor window will appear for that task. Add a lag of 1 month to this subtask. See what MS Project does.

Resources we will deal with shortly, the **Notes** field is quite straightforward, so that leaves us with the **Advanced** and **Custom Fields** menus.

Allocation of resources

Resources are either the people, materials or equipment needed to undertake tasks.

We should consider the resources we need to allocate to a particular task. For example let us go back to task 1a our Literature review. As you know performing such an operation is typically time-consuming. Let us allocate some resources to the task. We can go to **Tools**, then **Assign Resources**. We can double click on a particular subtask and in this case assign personnel. I have allocated Peter to this task 100 and demanded that

he perform the task. Sally I have requested she be allocated on a 50% (of her time) basis. Note when you extend with the menu option with the + sign, a number of other features become available. Click on **Add Resources** and see what this does.
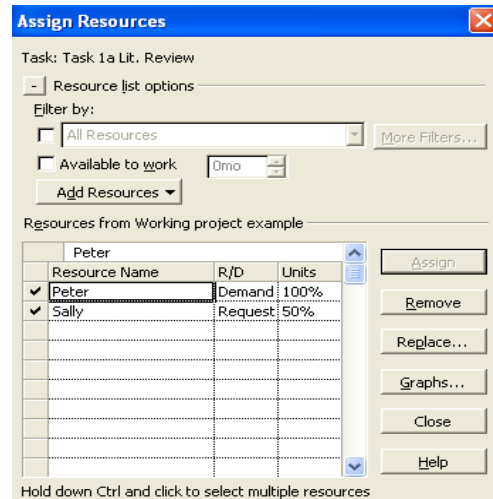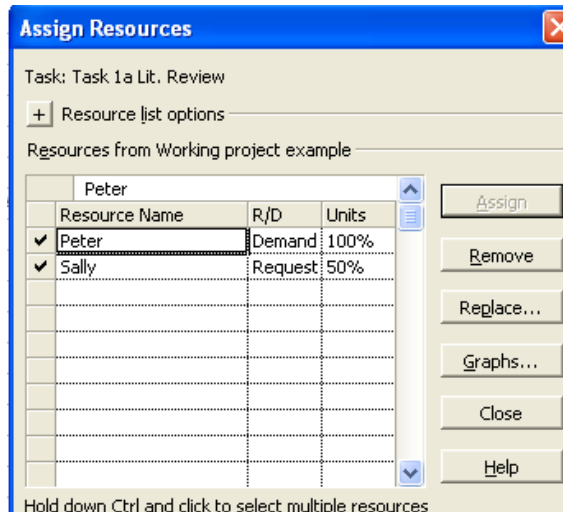
Let us take a little *detour* at this stage. On the left hand side of your screen you will be able to click on the **Resource Sheet** option that was pointed out in section relating to the side menus.

You should see a menu along the following lines appear. What I have done in this instance is add some values of my own, for example, a number of personnel and three PCs to help us with conducting the research outlined in the grant proposal. In a nutshell MS Project permits two types of resources either people (**Work**) or other things (**Material**).

	ⓘ	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code
1		Sally	Work		S	Data analysis	60%	$25.00/hr	$30.00/hr	$0.00	Prorated	Standard	
2		Meredith	Work		M	Data analysis	60%	$25.00/hr	$30.00/hr	$0.00	Prorated	Standard	
3		Paul	Work		P	DSTO	50%	$29.00/hr	$0.00/hr	$0.00	Prorated	Standard	
4		Peter	Work		P	ICT	100%	$35.00/hr	$0.00/hr	$0.00	Prorated	Standard	
5		Debbie	Work		D	ICT	50%	$42.00/hr	$0.00/hr	$0.00	Prorated	Standard	
6		Sophie	Work		S	Psychology	40%	$40.00/hr	$0.00/hr	$0.00	Prorated	Standard	
7		Simon	Work		S	Psychology	30%	$40.00/hr	$0.00/hr	$0.00	Prorated	Standard	
8		PC1	Material	machine time	P	CTS		$1,200.00		$5.00	Prorated		
9		PC2	Material	machine time	P	CTS		$1,200.00		$5.00	Prorated		
10		PC3	Material	machine time	P	CTS		$1,200.00		$5.00	Prorated		

Note I have also added details for the **workgroup** my available staff belong to, what **percentage** of their time they are available to work on my project, their **rates of pay**, **overtime** rate. You will note only Sally and Meredith have overtime opportunities, the rest of the employees are salary earners, so their hourly rates are calculated on the basis of a 35 hour working week.

I have also gone and set up their standard working hours.

So Sally (and all others) for example, works a '**standard**' day rather than shift or a 24 hour day! Simply double click on each individual resource in the screen above and you will be able to fill in the details. See how I have stipulated that the work day starts at 9am and finishes at 6pm and so on.

You will also note that the cost per use (**Cost/Use**) is $0.00 for personnel, but I have factored in $5.00 per use for the PCs as a means of calculating some sort of depreciation on the equipment.

Allocation of resources

We should now allocate personnel and equipment to the task at hand! Click on the first subtask 'Task 1a Lit. Review'. Then under **Tools** you will find the **Assign Resources** submenu. Click on the **+** sign to see all the possible options. Have a play to discover what the **Add Resources** option does.

For the lit review part of our project we would like to assign Peter and Paul to the task (*hint* keep your finger on the Ctrl key to select both at once).

Keep allocating personnel and equipment to the tasks along the following lines (you will note people have been allocated according to their strengths):

	Task Name	Duration	Start	Finish	Resource Names
1	⊟ Task 1 Identify/analyse range of knowledge types	15.2 mons	Jan 1 '08	Feb 27 '09	
2	Task 1a Lit. Review	7.88 mons	Jan 1 '08	Aug 7 '08	Paul[50%],Peter
3	⊟ Task 1b - 1g Explore knowledge intensive domain	8.5 mons	Jul 7 '08	Feb 27 '09	
4	Task 1b Conduct initial interviews	1.76 mons	Jul 7 '08	Aug 25 '08	Peter,Simon[30%],Sophie[40%]
5	Task 1c Conduct grounded theory on lit. review/interview transcript	3 mons	Sep 9 '08	Dec 1 '08	Meredith[60%],Sally[60%]
6	Task 1d Creation/conduct of questionnaire for feedback on expertis	2 mons	Aug 18 '08	Oct 10 '08	Debbie[50%],Peter,PC1[1 machine time]
7	Task 1e Questionnaire results with statistics/alternative approaches	1.41 mons	Oct 13 '08	Nov 20 '08	Meredith[60%],Sally[60%],Debbie[50%],PC2[1 machine time],PC3[1 machine time]
8	Task 1f Conduct face validity on questionnaire from DSTO participar	2 mons	Nov 24 '08	Jan 16 '09	Debbie[50%],Peter,Simon[30%],PC2[1 machine time]
9	Task 1g Questionnaire refinement	2 mons	Jan 5 '09	Feb 27 '09	Sophie[40%],PC1[1 machine time]
10	⊟ Task 2 Develop integrated framework	15.75 mons	Jan 5 '09	Mar 19 '10	
11	Task 2a Develop Expertise Ontology	2.44 mons	Jan 5 '09	Mar 12 '09	Debbie[50%],Peter,Simon[30%],Sophie[40%],Paul[50%],PC1[1 machine time]
12	Task 2b Develop unified model	6.9 mons	Mar 2 '09	Sep 9 '09	Debbie[50%],Paul[50%],Peter,PC1[1 machine time],PC2[1 machine time]
13	Task 2c Design unified toolkit	6 mons	Jun 1 '09	Nov 13 '09	Debbie[50%],Peter,Paul[50%],PC1[1 machine time],PC2[1 machine time],PC3[1 machine time]
14	Task 2d Develop/integrate toolkit within framework	6 mons	Oct 5 '09	Mar 19 '10	Debbie[50%],Paul[50%],Peter,PC1[1 machine time],PC2[1 machine time],PC3[1 machine time]
15	⊟ Task 3 Evaluate framework using practical applications	12 mons	Jan 4 '10	Dec 3 '10	
16	Task 3a Deploy framework	6 mons	Jan 4 '10	Jun 18 '10	Paul[50%],Peter
17	Task 3b Collect data regarding use of framework within DSTO	6 mons	Feb 1 '10	Jul 16 '10	Paul[50%],PC2[1 machine time],PC1[1 machine time]
18	Task 3c Analyse data from 3b, compare results with other studies	5 mons	Apr 5 '10	Aug 20 '10	Meredith[60%],Sally[60%],PC1[1 machine time],PC2[1 machine time],PC3[1 machine time]
19	Task 3d Modify/generalise framework	6 mons	Jun 21 '10	Dec 3 '10	Paul[50%],Debbie[50%],Peter,PC2[1 machine time]

Hint, at this stage make sure you remove all tasks numbering > 19. Note in the figure relevant to comment 26 how there are a number of tasks 20 and above. This adds confusion to MS Project. Simply remove all task numbers that are not actually tasks (the reason for this is that there may be hidden calculations in these 'phantom' tasks, which can upset the 'real' tasks you have created.

<div align="center">

**Incorporation of milestones**

</div>

Now we should ideally add some milestones to our project to indicate the critical areas that we need to be aware of. It is all very well to spend one's time reading but we need to retrieve data. We need a questionnaire. Click on **subtask 1d**, select **Advanced** and mark this subtask as a **milestone**, like so:
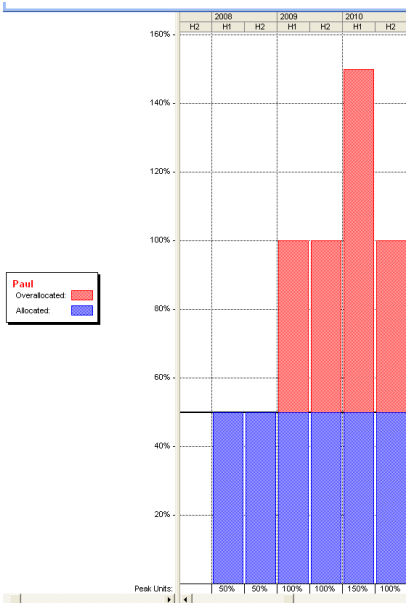

Similarly mark subtasks **2a**, **2b**, **3a**, **3b** and **3c** as milestones.

<div align="center">

Allocations

</div>

At this stage, let us examine the allocation of our staff members. Click on the **Resource Graph** on the left of the screen. You will note quite a few of our staff (by way of scrolling up and down) are over-allocated.
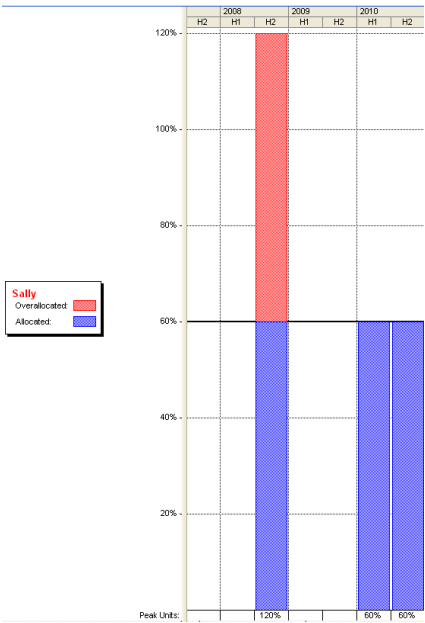
Sally

Paul

For example Sally appears to be over-allocated by about 60% in the second half of 2008. Other than that her workload is fine. Meredith is in a similar situation. Paul is over-allocated by 50% in the first and second half of 2009 and the second half of 2010. If this isn't bad enough he is over-allocated by basically 100% in the first half of 2010. Examine the others.

Double click on the bar and the following screen should appear. This is not a particularly important feature of MS Project, nevertheless it will allow you to format graphs for reports you may have to do etc.
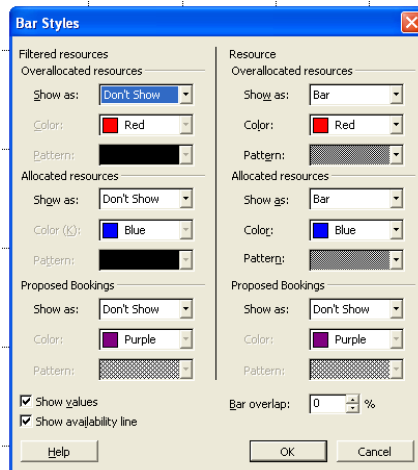
Clearly the allocation situation is unsatisfactory and we need to remedy it. We have a number of options available to us.

we can add more staff to our project;

we can spread the number of staff we have more effectively over the timeframe or;

we can reprioritize our staff workloads so that we selfishly expect them to work only on our project, rather than anybody else's!

Now double click on the individual rather than the bar, and their **resource information** comes up again. What should we do? I think we have been overambitious with what we have given our staff to do. Starting with Sally, let's reduce her workload. The main problem with her is that she is over-allocated in the second half of 2008. Other than that her allocation in fine. Click back on the **gantt chart** option and let us change her workload. In this case I've reduced her workload down to 20%. When going back to the **resource graph** her workload now looks like the following:
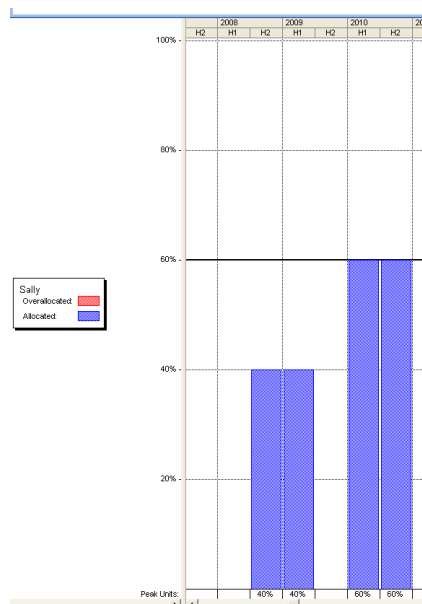
Another way we can do things is to use **leveling**. Read what MS Project has to say on the issue of **leveling**.

Under **Tools**, you will find **Level Resources**, like so:
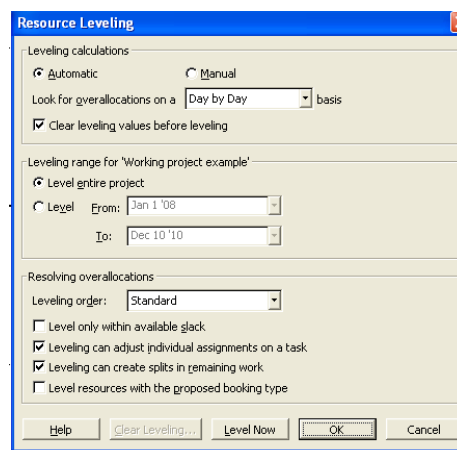
I have decided to choose automatic leveling. Note the **Level entire project** is selected and MS Project does recognise the project takes place from Jan 1st 2008 through to Dec 10th 2010. Click on **OK** and see what happens. Go back to the **Gantt Chart** option. Notice what has happened to your timeline.
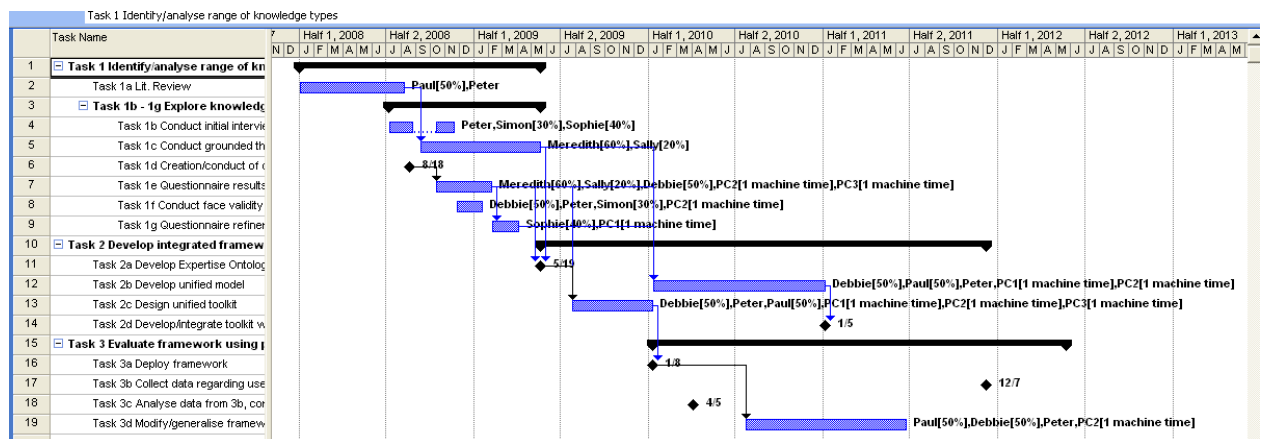
This is obviously no good! Now the project has slipped through to the second half of 2012! Close the MS Project software **without saving** at this particular step! Now re-open your project again.

Try a number of different options for leveling … In the end they seem to level on the basis of move workload allocations backward. We still end up going beyond our 2010 deadline. This may be acceptable for some projects, but not here in the case of our grant expenditure.

We can go back and perform manually add extra staff or increase the workload % we expect or our staff. Alternatively you may find you have to add extra staff to the project.

I don't have more to add at this point. This has been an introduction to MS Project. Feel free to play with it further.